APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,211	01/14/2002	Sudhakar Valluru	2705-705	5753

20575   7590   09/25/2007
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EXAMINER
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ART UNIT	PAPER NUMBER
2146	

MAIL DATE	DELIVERY MODE
09/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/047,211	VALLURU ET AL.
	Examiner	Art Unit	
	Guang Li	2146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02/09/2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20070911

DETAILED ACTION

1.   The allowance of claims 1-49 are hereby withdrawn in view of newly discovered

prior art.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office

action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since

this application is eligible for continued examination under 37 CFR 1.114, and the fee

set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has

been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 2/9/07 has

been entered.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

4.   Claims 1-6,8-10, 28-33,35-37,39-44 and 46-48 are rejected under 35

U.S.C. 102(e) as being anticipated by Tony et al. (US 2001/0002912 A1).

5.   Regarding claim 1, Tony teaches a method for fault management in a distributed

network management station (arrangement for providing distribution with in a Piconet

using short range radio technology see ¶[0001]) comprising :

initiating a first device coupled to a network, wherein said first device comprises

at least one of a single processing element device (Bluetooth Device Fig.10), a

computing system, or a blade type computing system compliant with a compact

peripheral component interconnect (PCI) chassis (A Bluetooth unit A is a member of

first Piconet checked whether the unit A is the master of the first Piconet see ¶[0102];

Fig. 11 item 1510-1530);

broadcasting from said first device an information packet describing said first

device to a plurality of devices coupled to the network, wherein said information packet

helps define one of said first device and said devices as a master device for said

network (The master unit of the first Piconet transmits information concerning the new

forwarding unit to all the slave unit see ¶[0102]);

listening at said first device for responses to said information packet from said

devices (The master unit of the second Piconet sends information to unit A see ¶[0110];

Fig. 12a item 2135); and

resolving status of said first device coupled to said network based on any

responses received, wherein said resolving results in said distributed network

management station having said defined master device being one of said first device

and said devices (in block 2170 the master unit of the first piconet transmits information

concerning the new forwarding node, all the information stored in the master unit or a

subset thereof, to the at least one slave unit, except unit A, when unit A is a slave unit of

the first piconet, and unless the intra-piconet broadcast mechanism is used to convey

information see¶[0110]; Fig 12a-b; Fig. 13a-b).

6.   Regarding claim 2, Tony teaches the method as recited in Claim 1, wherein said

first device initiates as a secondary device (Any BT unit can become the master or slave

see ¶[0006]).

7.   Regarding claim 3, Tony teaches the method as recited in Claim 1, wherein said

information packet comprises a participating-device internet protocol (IP) of said first

device (Associations between an IP address and a low layer address (e.g. Medium

Access Control MAC address) for a peripheral node or for all nodes see ¶[0032]).

8.   Regarding claim 4, Tony teaches the method as recited in Claim 3, wherein said

information packet also comprises a participating-device message authentication code

(MAC) of said first device (a field for an access Code, a header field and a payload field

see ¶[0014]).

9.   Regarding claim 5, Tony teaches the method as recited in Claim 3, wherein said

information packet further comprises information regarding the previous state of said

first device (Unit A can be in the first piconet as master device in the previous state,

when join the second piconet will determined the current state in the second piconet see

¶[0112]).

10.   Regarding claim 6, Tony teaches the method as recited in Claim 3, wherein said

information packet additionally comprises information regarding a current state of said

first device (Unit A can be in the first piconet as master device in the previous state,

when join the second piconet will determined the current state in the second piconet see ¶[0112]).

11.   Regarding claim 8, Tony teaches the method as recited in Claim 1, wherein said status between said first device and said plurality of devices is resolved by an evaluation of each said information packet from said first device and said plurality of devices (the status of the Unit A as master device resolve through flowchart Fig.12a-b and Fig.13a-b).

12.   Regarding claim 9, Tony teaches the method as recited in Claim 1, wherein said distributed network management station integrates plug-and-play capability of each of the plurality of devices into said network (Add on Bluetooth communication device 510 see Fig. 3a; ¶[0007]).

13.   Regarding claim 10, Tony teaches the method as recited in Claim 1, wherein said distributed network management station integrates scalability of each of the plurality of devices into said network (the radio related parameters, e.g. the frequency hop sequence, and the timing parameters, e.g. the clock value of the master of the piconet, have to be switched in order for the Bluetooth unit to be able to communicate in the new piconet see ¶[0088]).

14.   Regarding claims 28-33 and 35-37, they are rejected for the same reason as claims 1-6 and 8-10 as set forth hereinabove. Regarding claims 28-33 and 35-37, Tony taught the claimed method, therefor together, Tony teaches the claimed computer-usable medium (CPU, SRAM and Flash see Fig.2).

15.   Regarding claims 39-44 and 46-48, they are rejected for the same reason as

claims 1-6 and 8-10 as set forth hereinabove. Regarding claims 39-44 and 46-48, Tony

taught the claimed method, therefor together, Tony teaches the claimed mechanism

(Bluetooth Unit Fig.10).

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

17.   Claims 7, 11-27, 34, 38, 45 and 49 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tony et al. (US 2001/0002912 A1) in view of Johansson et al.

(US2002/0044549 A1).

18.   Regarding claim 7, Tony teaches fault management in a distributed network

management station comprising: initiating a first device couple to a network, that first

device able to broadcasting information packer to a plurality of devices over the

network, listening to first device response and resolving conflict in master device. Tony

also teaches information packet comprises a participating-device internet protocol of the

first device.

        Tony does not explicitly disclose Information packet further comprises

information regarding a total system-up-time of said first device.

Johansson teaches information packet further comprises information regarding a total system-up-time of said first device (Idle user timer "If the idle node's own ID or the number of nodes detected by the idle node (D) is not the highest among all detected idle nodes ("No" path out of decision step 951) then the idle node sets a timer (step 954) and waits to be paged (step 957)" see¶[0077]). Johansson further provides the advantage of providing logically separated scatternets, the maximum connectivity scatternet and the traffic scatternet. An MCS maintains information about all nodes in the scatternet in order to facilitate a quick path establishment when a destination node is searched for (see¶[0024]).

It would have been obvious to one of ordinary skill in the art, having the teachings of Tony and Johansson before them at the time the invention was made to modify the fault management in a distributed network management station of Tony to include total system-up-time as taught by Johansson.

One of ordinary skill in the art would have been motivated to make this modification in order to provide auto discovery for fault management system in view of Johansson.

19.   Regarding claim 11, Tony together with Johansson taught fault management in a distribution network as recited in Claim 7, as described above. Johansson further teaches network management station integrates self-healing capabilities of each of the plurality of devices into said network (If a page procedure fails, the node initiating the page scheduling selects an alternative branch to the start node and makes a new attempt see¶[0216]).

20.   Regarding claim 12, Tony teaches a method for fault management in a

distributed network management station comprising: initiating a first device coupled to a

network, said first device initiating as a secondary device (Any BT unit can become the

master or slave see ¶[0006]), wherein said first device comprises at least one of a single

processing element device, a computing system, or a blade type computing system

compliant with a compact peripheral component interconnect (PCI) chassis (A Bluetooth

unit A is a member of first Piconet checked whether the unit A is the master of the first

Piconet see ¶[0102]; Fig. 11 item 1510-1530); broadcasting from said first device an

information packet describing said first device to a plurality of devices coupled to the

network, wherein said information packet helps define one of said first device and said

devices as a master device for said network(The master unit of the first Piconet

transmits information concerning the new forwarding unit to all the slave unit see

¶[0102]); listening at said first device for responses to said information packet from said

devices (The master unit of the second Piconet sends information to unit A see ¶[0110];

Fig. 12a item 2135); resolving status of said first device coupled to said network based

on any responses received, wherein said resolving results in said distributed network

management station having said defined master device and multiple secondary devices,

wherein said defined master device is one of said first device and said devices (in block

2170 the master unit of the first piconet transmits information concerning the new

forwarding node, all the information stored in the master unit or a subset thereof, to the

at least one slave unit, except unit A, when unit A is a slave unit of the first piconet, and

unless the intra-piconet broadcast mechanism is used to convey information

see¶[0110]; Fig 12a-b; Fig. 13a-b).

Tony does not explicitly disclose initiating a fail-over process, wherein said fail-

over process results in said secondary devices re-evaluation of said master device.

Johansson teaches initiating a fail-over process, wherein said fail-over process

results in said secondary devices re-evaluation of said master device (master and slave

detection flowchart Fig. 9A-9C and Page master node with next highest number of slave

nodes see Fig. 9 and Fig 10).

It would have been obvious to one of ordinary skill in the art, having the

teachings of Tony and Johansson before them at the time the invention was made to

modify the fault management in a distributed network management station of Tony to

include self healing capabilities of each of the plurality of devices into said network as

taught by Johansson.

One of ordinary skill in the art would have been motivated to make this

modification in order to provide master device recovery purpose in view of Johansson.

21.   Regarding claim 13, Tony together with Johansson taught fault management in a

distribution network as recited in Claim 12, as described above.

Tony further teaches information packet broadcast by first device comprises:

transmitting a participating-device internet protocol (IP) of said first device

(Associations between an IP address and a low layer address (e.g. Medium Access

Control MAC address) for a peripheral node or for all nodes see ¶[0032]);

transmitting a participating-device message authentication code (MAC) of said

first device (a field for an access Code, a header field and a payload field see ¶[0014]);

transmitting information regarding the previous state of said first device;

transmitting information regarding the current state of said first device (Unit A can be in

the first piconet as master device in the previous state, when join the second piconet will

determined the current state in the second piconet see ¶[0112]).

Tony does not explicitly disclose Information packet further comprises

information regarding a total system-up-time of said first device.

Johansson teaches information packet further comprises information regarding a

total system-up-time of said first device (Idle user node timer "If the idle node's own ID

or the number of nodes detected by the idle node (D) is not the highest among all

detected idle nodes ("No" path out of decision step 951) then the idle node sets a timer

(step 954) and waits to be paged (step 957)" see¶[0077]). Johansson further provides

the advantage of providing logically separated scatternets, the maximum connectivity

scatternet and the traffic scatternet. An MCS maintains information about all nodes in

the scatternet in order to facilitate a quick path establishment when a destination node

is searched for (see¶[0024]).

It would have been obvious to one of ordinary skill in the art, having the

teachings of Tony and Johansson before them at the time the invention was made to

modify the fault management in a distributed network management station of Tony to

include total system-up-time as taught by Johansson.

One of ordinary skill in the art would have been motivated to make this
modification in order to provide auto discovery for fault management system in view of
Johansson.

22.   Regarding claims 14-17, Tony together with Johansson taught fault management
in a distribution network as recited in Claim 12, as described above. Claims 14-17 are
rejected for the same reason as claims 8-11 as set forth hereinabove.

23.   Regarding claim 18, Tony together with Johansson taught fault management in a
distribution network as recited in Claim 12, as described above. Johansson further
teaches wherein said secondary devices re-evaluation occurs due to a loss of
communication with said master device (master and slave detection flowchart Fig. 9A-
9C and Page master node with next highest number of slave nodes see Fig. 9 and Fig
10).

24.   Regarding claim 19, Tony together with Johansson taught fault management in a
distribution network as recited in Claim 12, as described above. Johansson further
teaches wherein said secondary devices re-evaluation comprises questioning said
master device for state or status (The fact that the responding node's status as idle,
master or slave is indicated in the INQUIRY RESPONSE message allows the inquiring
node to correctly interpret the contents of the AM_ADDR as either number of slave
nodes in the responding node's piconet or the number of nodes that the responding
nodes can reach see ¶[0071]).

25.   Regarding claim 20, Tony together with Johansson taught fault management in a
distribution network as recited in Claim 19, as described above. Johansson further

teaches wherein said state or status of said master device comprise at least one of said

master device in a paused state (The fact that the responding node's status as idle,

master or slave is indicated in the INQUIRY RESPONSE message allows the inquiring

node to correctly interpret the contents of the AM_ADDR as either number of slave

nodes in the responding node's piconet or the number of nodes that the responding

nodes can reach see ¶[0071]), said master device in a crashed state, transmission

control protocol (TCP) disconnect from said master device, and overall loss of master

device (The MCS is maintained autonomously as new nodes arrive to the scatternet

and other nodes leave the scatternet see ¶[0024]).

26.   Regarding claim 21, Tony teaches a computer system (Bluetooth Device see

Fig.10) comprising: a bus; a memory unit coupled to said bus said a processor for

managing faults in a distributed network management station (The Bluetooth unit 1195

comprises basic Bluetooth functions 1150, forwarding functions 1160 and a database

1180. The block basic Bluetooth functions 1150 comprises the functions performed by a

transceiver, a clock, a memory, a power source, logic circuits for implementing the

Bluetooth protocol stack, logic circuits for analyzing signaling messages and logic

circuits for generating signaling messages see ¶[0075]) that comprises:

        a first device coupled to a network, said first device initiating as a secondary

device, wherein said first device comprises at least one of the single processing

element device, a computer system, or a blade type computer system compliant with a

compact peripheral component interconnect (PCI) chassis (A Bluetooth unit A is a

member of first Piconet checked whether the unit A is the master of the first Piconet see

¶[0102]; Fig. 11 item 1510-1530);

an information packet describing said first device broadcast from said first device

to a plurality of devices coupled to the network, wherein said information packet helps

define one of said devices as a master device for said network (The master unit of the

first Piconet transmits information concerning the new forwarding unit to all the slave

unit see ¶[0102]);

responses to said information packet, said responses broadcast from one or

more of said devices (The master unit of the first Piconet transmits information

concerning the new forwarding unit to all the slave unit see ¶[0102]);

said defined master device (Master Device see Fig. 6 item F and J) and at least

one secondary device (Slave Devices see Fig.6 item A-D and G-I), wherein said defined

master device is at least one of said first device and said devices, wherein said master

device is defined based on said information packet and said responses (in block 2170

the master unit of the first piconet transmits information concerning the new forwarding

node, all the information stored in the master unit or a subset thereof, to the at least one

slave unit, except unit A, when unit A is a slave unit of the first piconet, and unless the

intra-piconet broadcast mechanism is used to convey information see¶[0110]; Fig 12a-

b; Fig. 13a-b).

Tony does not explicitly disclose initiating a fail-over process, wherein said fail-

over process results in said secondary devices re-evaluation of said master device.

Johansson teaches initiating a fail-over process, wherein said fail-over process results in said secondary devices re-evaluation of said master device (master and slave detection flowchart Fig. 9A-9C and Page master node with next highest number of slave nodes see Fig. 9 and Fig 10).

It would have been obvious to one of ordinary skill in the art, having the teachings of Tony and Johansson before them at the time the invention was made to modify the fault management in a distributed network management station of Tony to include self healing capabilities of each of the plurality of devices into said network as taught by Johansson.

One of ordinary skill in the art would have been motivated to make this modification in order to provide master device recovery purpose in view of Johansson.

27.   Regarding claims 22-23, Tony together with Johansson taught fault management in a distribution network as recited in Claim 21, as described above. Claims 22-23 are rejected for the same reason as claims 13-14 as set forth hereinabove.

28.   Regarding claim 24, Tony together with Johansson taught fault management in a distribution network as recited in Claim 21, as described above. Tony further teaches distributed network management station comprises at **least one** of: plug-and-play capability of said first device (Add on Bluetooth communication device 510 see Fig. 3a; ¶[0007]); scalability of said first device (the radio related parameters, e.g. the frequency hop sequence, and the timing parameters, e.g. the clock value of the master of the piconet, have to be switched in order for the Bluetooth unit to be able to communicate in the new piconet see ¶[0088]), and self-healing capability of said first device.

29.   Regarding claims 25 and 26, Tony together with Johansson taught fault

management in a distribution network as recited in Claim 21, as described above.

Claims 25 and 26 are rejected for the same reason as claims 18 and 19 as set forth

hereinabove.

30.   Regarding claim 27, Tony together with Johansson taught fault management in a

distribution network as recited in Claim 21, as described above. Claim 27 is rejected for

the same reason as claim 20 as set forth hereinabove.

31.   Regarding claim 34 and 45, Tony together with Johansson taught fault

management in a distribution network, as described above. Claims 34 and 45 are

rejected for the same reason as claim 7 as set forth hereinabove.

32.   Regarding claim 38 and 49, Tony together with Johansson taught fault

management in a distribution network, as described above. Claims 38 and 49 are

rejected for the same reason as claim 11 as set forth hereinabove.

Conclusion

The following prior art made of record and not relied upon is cited to establish the

level of skill in the applicant's art and those arts considered reasonably pertinent to

applicant's disclosure. See **MPEP 707.05(c)**.

The following reference teaches execution of trial data.

- US 2002/0168943 A1 (Callaway, JR. et al.)

- US 2003/0012168 A1 (Elson et al.)

The examiner requests, in response to this Office action, support be shown for

language added to any original claims on amendment and any new claims. That is,

indicate support for newly added claim language by specifically pointing to page(s) and line no(s) in the specification and/or drawing figure(s). This will assist the examiner in prosecuting the application.

When responding to this office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111(c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guang Li whose telephone number is (571) 270-1897. The examiner can normally be reached on Monday-Friday 8:30AM-5:00PM(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 17, 2007
Guang Li
Patent Examiner

Supervisory Patent Exam